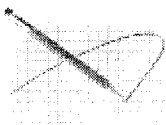


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Jodi Burgess

03/10/2003 10:07 AM

To: NCIC HPV, Jodi Burgess/DC/USEPA/US@EPA

CC:

CC:

Subject: Environmental Defense comments on
2,2-Bis(bromomethyl)-1,3-propanediol (CASRN 3296-90-0)



Richard_Denison@environmentaldefense.org on 03/07/2003 02:57:59 PM

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Subject: Environmental Defense comments on 2,2-Bis(bromomethyl)-1,3-propanediol (CASRN 3296-90-0)

(Submitted via Internet 3/7/03 to oppt.ncic@epa.gov, hpv.chemrtk@epa.gov, boswell.karen@epa.gov, chem.rtk@epa.gov, MTC@mchsi.com and McBriarty@AmeriBrom.dsb.com)

Environmental Defense appreciates this opportunity to submit comments on the robust summary/test plan for 2,2-Bis(bromomethyl)-1,3-propanediol (CASRN 3296-90-0).

AmeriBrom, Inc. has submitted a Robust Summary/Test Plan for 2,2-bis(bromomethyl)-1,3-propanediol under the EPA HPV Challenge Program. According to the Robust Summary/Test Plan, 2,2-Bis(bromomethyl)-1,3-propanediol is used exclusively as a fire retardant* in unsaturated polyester resins and rigid polyurethane foams. The Test Plan provides a concise summary of data for those SIDS elements addressed by available studies and proposes appropriate additional studies for those SIDS elements that are not yet addressed. The Robust Summary is well organized to clearly present and describe the most relevant available studies. A minor comment for improvement of the Test Plan would be to include a list of synonyms for 2,2-bis(bromomethyl)-1,3-propanediol. A minor comment for improvement of the Robust Summary would be to delete the description of the genotoxicity study of monobromopentaerythritol that is included along with similar studies of 2,2-bis(bromomethyl)-1,3-propanediol. Monobromopentaerythritol is a closely related compound and a minor contaminant of technical grade 2,2-bis(bromomethyl)-1,3-propanediol, but this study is not relevant here.

According to the Test Plan, worker exposure to 2,2-bis(bromomethyl)-1,3-propanediol is minimal due to the use of good industrial hygiene practices and there are no direct consumer applications of 2,2-bis(bromomethyl)-1,3-propanediol. The Test Plan states that consumer exposure to 2,2-bis(bromomethyl)-1,3-propanediol is limited to the breakdown of products containing this chemical. The facts that occupational exposure occurs and that 2,2-bis(bromomethyl)-1,3-propanediol may be released on degradation of products in which it is used raises some concern. That is, data presented in the Robust Summary/Test Plan indicate this chemical is only slowly degraded in the environment, that it is mutagenic in some systems, that it was reported to be a carcinogen in a recent study by the National Toxicology Program and that it compromises reproduction in female mice. Thus, any occupational or environmental exposure needs to be avoided or minimized. To this end, in order to better

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assess consumer and environmental risks associated with the use of 2,2-bis(bromomethyl)-1,3-propanediol, the Test Plan should clearly state if this chemical is an additive or a reactive flame retardant. Reactive flame retardants are reactive components that are chemically bonded with the polymer molecule. Additive flame retardants are incorporated into the polymer either prior to, during or (most frequently) following polymerization, but are not incorporated directly into the polymeric structure. A reactive flame retardant is much less likely to be released into the environment in the form of the parent compound and, consequently, less likely to exert toxicity associated with the parent compound. Thus, 2,2-bis(bromomethyl)-1,3-propanediol would be less likely to be a risk to the environment and consumers if it is a reactive flame retardant.

Thank you for this opportunity to comment.

Hazel B. Matthews, Ph.D.
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* The term flame retardant is the more appropriate and more frequently term used to describe this and similar chemicals because products containing them still burn, but burn less rapidly than those that do not.